

REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 1 and 2-7 are now present in this application. Claim 1 is independent. Claim 1 is amended, claim 2 is canceled, and claims 6 and 7 are added. No new matter is involved.

Reconsideration of this application is respectfully requested.

Rejection Under 35 U.S.C. §102

Claims 1 and 3-5 stand rejected under 35 U.S.C. §102(a, e) as being anticipated by U.S. Patent Application Publication 2002/0074549 to Park (hereinafter, "Park '549"). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Applicant respectfully submits that this rejection is moot in view of the addition of the subject matter of originally filed claim 2 to claim 1. The subject matter of original claim 2 is not addressed in this rejection. Rather, a separate rejection of claim 2, discussed below, is of record with respect to claim 2. Applicants will discuss the rejection of amended claim 1 and dependent claims 3-5 in light of the rejection of original claim 2, the subject matter of which is now present in claim 1 and, by dependency, in claims 3-5.

Rejections under 35 U.S.C. §103

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Published Patent Application No. 2001/0074394 (hereinafter, "Park '394") in view of Park '549. This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Because Applicant has amended claim 1 to include the subject matter of original claim 2, therein, and because claims 3-5 depend from amended claim 1, Applicant will discuss amended claims 1 and 3-5 in traversing this rejection.

The Office Action asserts that Park '394 differs from the claimed invention in that the claimed invention requires the use of a diffracting mask to form the patterned organic insulating layer.

Applicant respectfully disagrees, and submits that Park '394 does not disclose selectively removing the patterned organic insulating layer as the organic insulating material is removed in the step of selectively removing the inorganic insulating material. In other words, in Park '394 there is no simultaneous selective removal of the patterned organic insulating layer and removal of the inorganic insulating material, as recited.

Applicant also makes reference to paragraph [51] of the main body of Applicant's specification, in this regard, which clearly points out that, instead

of completely removing the organic protective film 62 over the gate and data pads 54 and 56 after the contact holes 50a, 50b and 50c are defined, the present invention performs these two step simultaneously.

In an exemplary embodiment of the present invention, the contact hole is formed by etching the organic insulating material and simultaneously ashing the inorganic insulating material. In other words, while the contact hole is etched, at the same time, the inorganic insulating layer is ashed. As a result, the shape of the resulting contact hole is substantially different from a contact hole formed by etching an insulating player using the pattern of the photoresist.

Applicant cannot find such a feature disclosed in Park '394.

Accordingly, even if Park '394 modified, as suggested, in view of Park '549, the resulting modified version of Park '394 would not meet, or render obvious, the claimed invention.

The Office Action continues, in an attempt to remedy this admitted deficiency in Park '394, by turning to Park '549, and alleging that it would be obvious to use a diffracting mask to pattern the photoresist in the process of Park '394, the motivation to do this being based on the teaching in Park '549 that diffracting masks are desirable for producing a multi-thickness patterned photoresist and because Park '394 requires a multi-thickness patterned photoresist.

Applicant respectfully disagrees.

Applicant notes that the Office action does not point out where Park '549 teaches that diffracting masks are desirable to produce a multi-thickness photoresist, and Applicant has not found such a teaching in Park '549.

In this regard, the Office Action concludes, without presenting any objective factual evidence in support of the conclusion, that "it is self evident from the disclosure of Park '549 that diffracting masks are used to produce multi-thickness photoresist layers using a single exposure step." Applicant respectfully disagrees, especially in view of the fact that Park '549 explicitly discloses using first, second, third and fourth masks throughout its specification. Moreover, in paragraph [0086], Park '549 discloses exposing the photoresist film to light "using identical or different masks" (plural number) per region.

Regarding using a diffracting mask, Park '549 discloses, in paragraphs [0163] to [0164] is that such a mask is used to reduce the amount of light applied to the portions of the photoresist film with underlying metal layers.

Park '394 appears to use a non-diffractive light mask to form different thickness photoresist sections, and discloses no need to use a diffractive mask, and discloses no problem such as that addressed by Park '495 that was addressed by using a diffractive mask.

A showing of a suggestion, teaching, or motivation to combine the prior art references, which is an "essential evidentiary component of an obviousness

holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998), must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Applicant respectfully submits that the broad, conclusory statement that Park '549 discloses using diffracting mask to form a photoresist layer of different thicknesses does not constitute evidence of an incentive for one of ordinary skill in the art to go to the trouble and expense of providing yet another mask (a diffractive mask) to Park '394 to achieve what Park '394 already achieves using its existing mask.

Furthermore, neither applied reference discloses selectively removing the patterned organic insulating layer as the organic insulating material is removed in the step of selectively removing the inorganic insulating material, as recited, so even if these references were properly combined, which they are not, for reasons stated above, they would not result in, or render obvious, the claimed invention.

Accordingly, the Office Action does not make out a *prima facie* case of obviousness of the claimed invention based on the applied references. Thus, the rejection of claim 2 is improper and should be withdrawn.

Reconsideration and withdrawal of this rejection and allowance of claims 1, as amended) and 3-5 is respectfully requested.

New Claims 6 and 7

Claims 6 and 7 depend from claim 1 and are patentable at least for the reasons that claim 1 is patentable over the applied art, for reasons stated above. Support for the new claims is found in Applicant's originally filed disclosure including, for example, paragraph [50] of Applicant's specification..

Additional Cited References

Since the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

Application No.: 10/621,327
Art Unit 2822

Attorney Docket No. 2658-0307P
Reply to September 2, 2004 Office Action
Page 10

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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